

## Attachment 1. – Dipole Validation Plots

## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 43$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY4 Configuration:**

Probe: EX3DV4 - SN3643; ConvF(8.96, 8.96, 8.96); Calibrated: 2011-01-24; Electronics: DAE3 Sn519

Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2011-07-06; Ambient Temp: 22.3; Tissue Temp: 22.6

### **Dipole Validation**

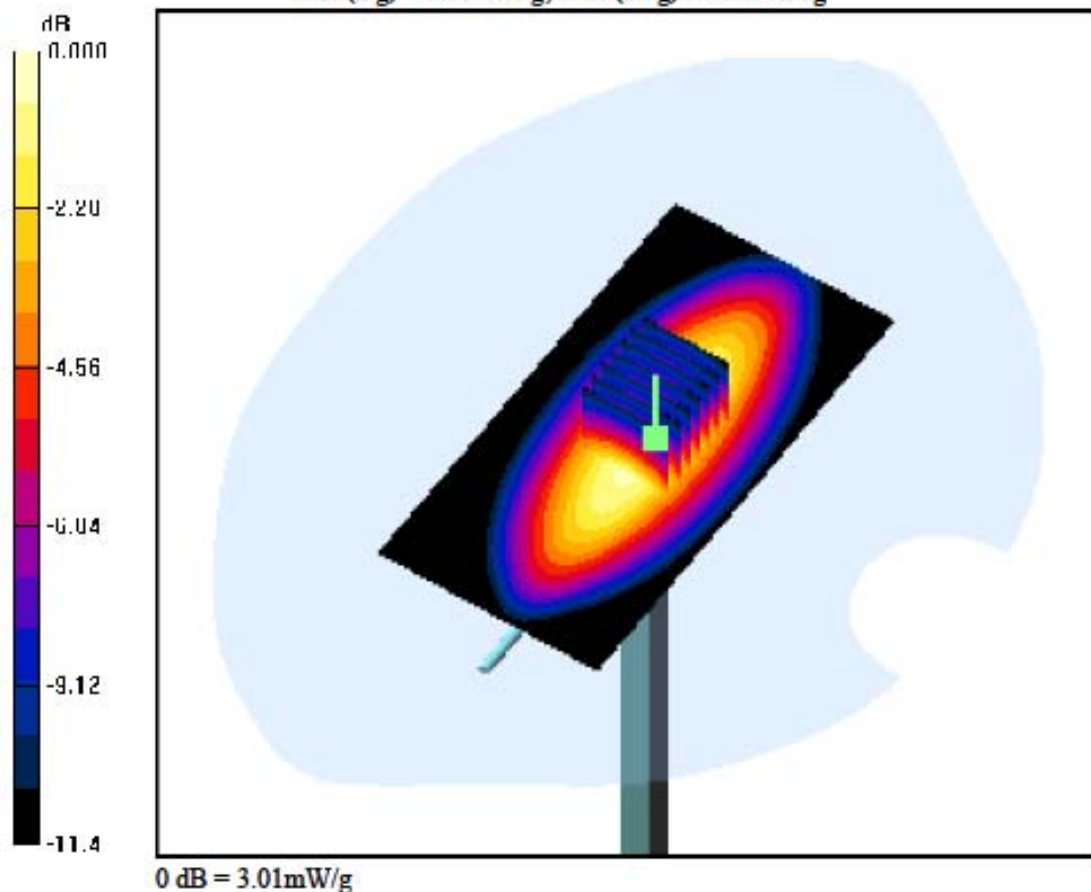
**Area Scan (51x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = -0.015 dB

Peak SAR (extrapolated) = 3.96 W/kg

SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.46 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

**Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1**

**Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 54.1$ ;  $\rho = 1000 \text{ kg/m}^3$**

**Phantom section: Flat Section**

### **DASY4 Configuration:**

**Probe: EX3DV4 - SN3643; ConvF(8.97, 8.97, 8.97); Calibrated: 2011-01-24; Electronics: DAE3 Sn519**

**Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223**

**Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186**

**Test Date: 2011-07-06; Ambient Temp: 22.3; Tissue Temp: 22.6**

### **Dipole Validation**

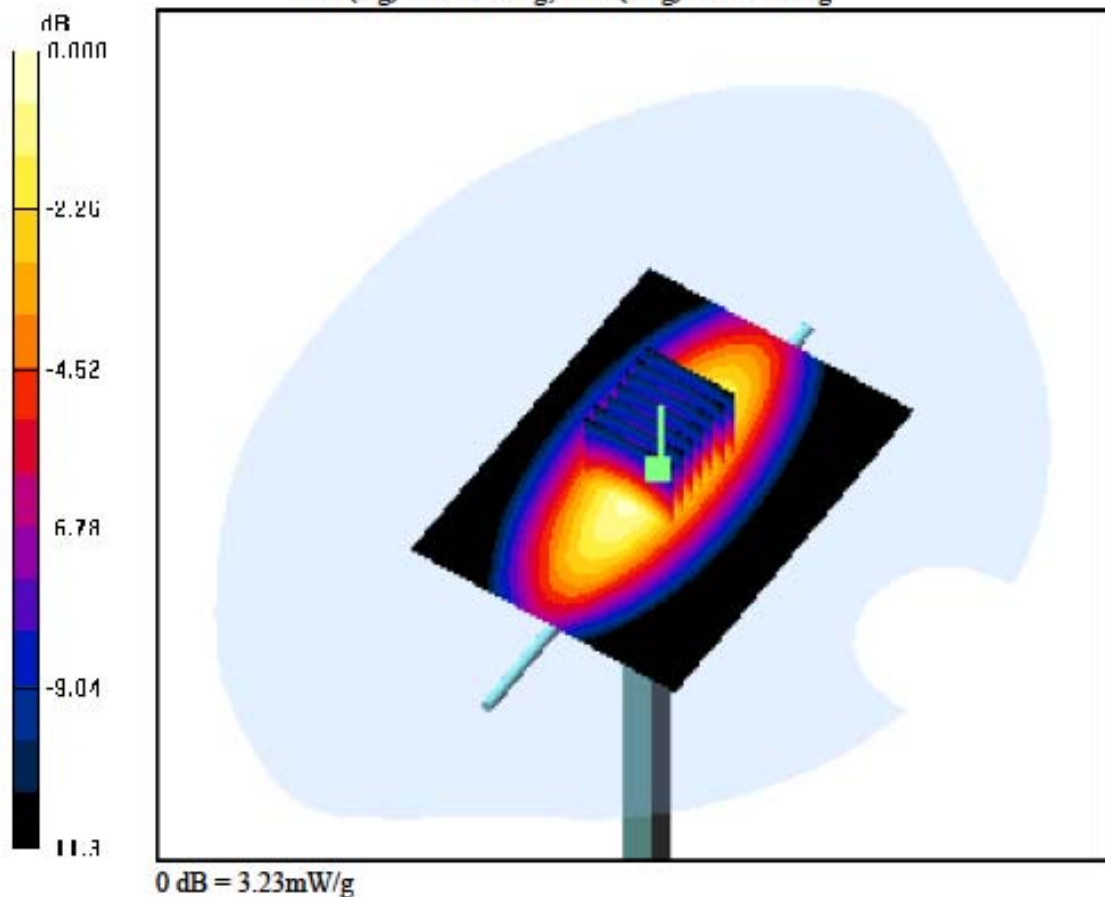
**Area Scan (61x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$**

**Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$**

**Power Drift = -0.057 dB**

**Peak SAR (extrapolated) =  $4.21 \text{ W/kg}$**

**SAR(1 g) =  $2.55 \text{ W/kg}$ ; SAR(10 g) =  $1.57 \text{ W/kg}$**



## DIGITAL EMC CO., LTD

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.45 \text{ mho/m}$ ;  $\epsilon_r = 39.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY4 Configuration:**

Probe: EX3DV4 - SN3643; ConvF(8.26, 8.26, 8.26); Calibrated: 2011-01-24; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2011-07-07; Ambient Temp: 22.5; Tissue Temp: 22.7

### **Dipole Validation**

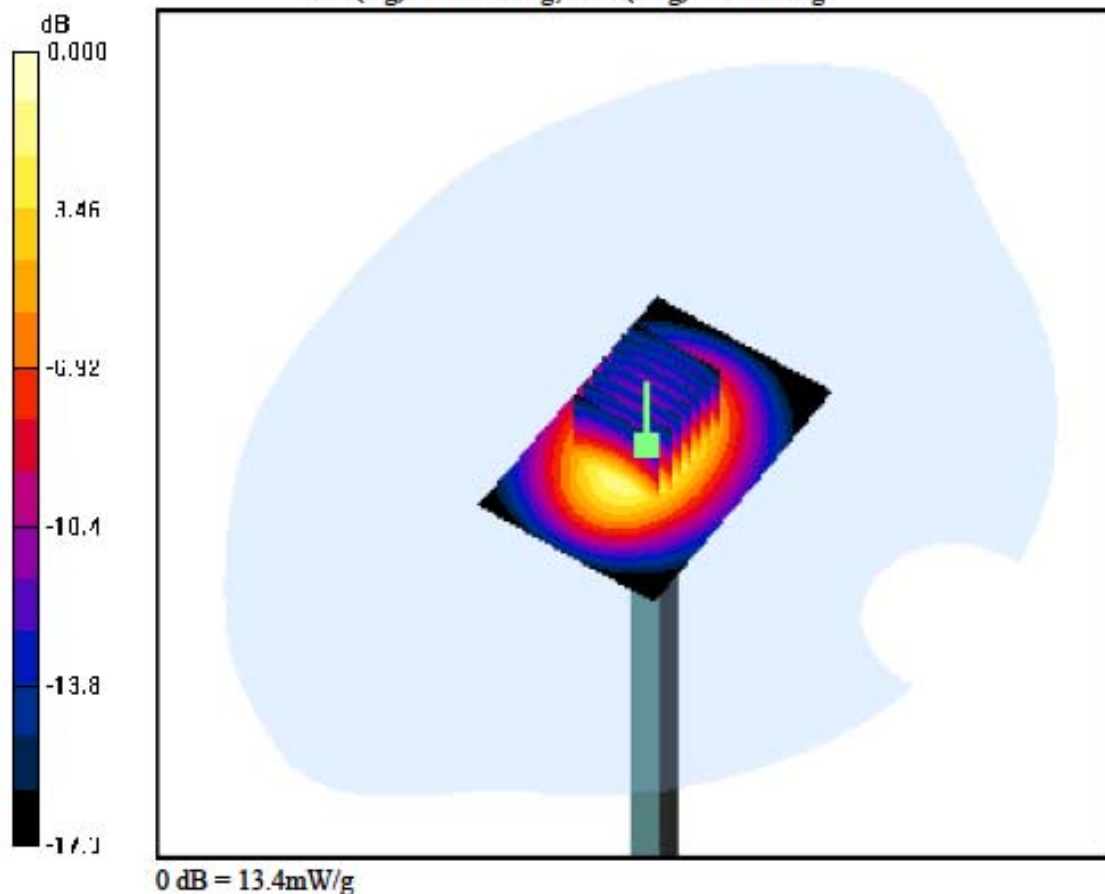
**Area Scan (61x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.074 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.5 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.54 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY4 Configuration:**

Probe: EX3DV4 - SN3643; ConvF(7.19, 7.19, 7.19); Calibrated: 2011-01-24; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2011-07-07; Ambient Temp: 22.5; Tissue Temp: 22.7

### **Dipole Validation**

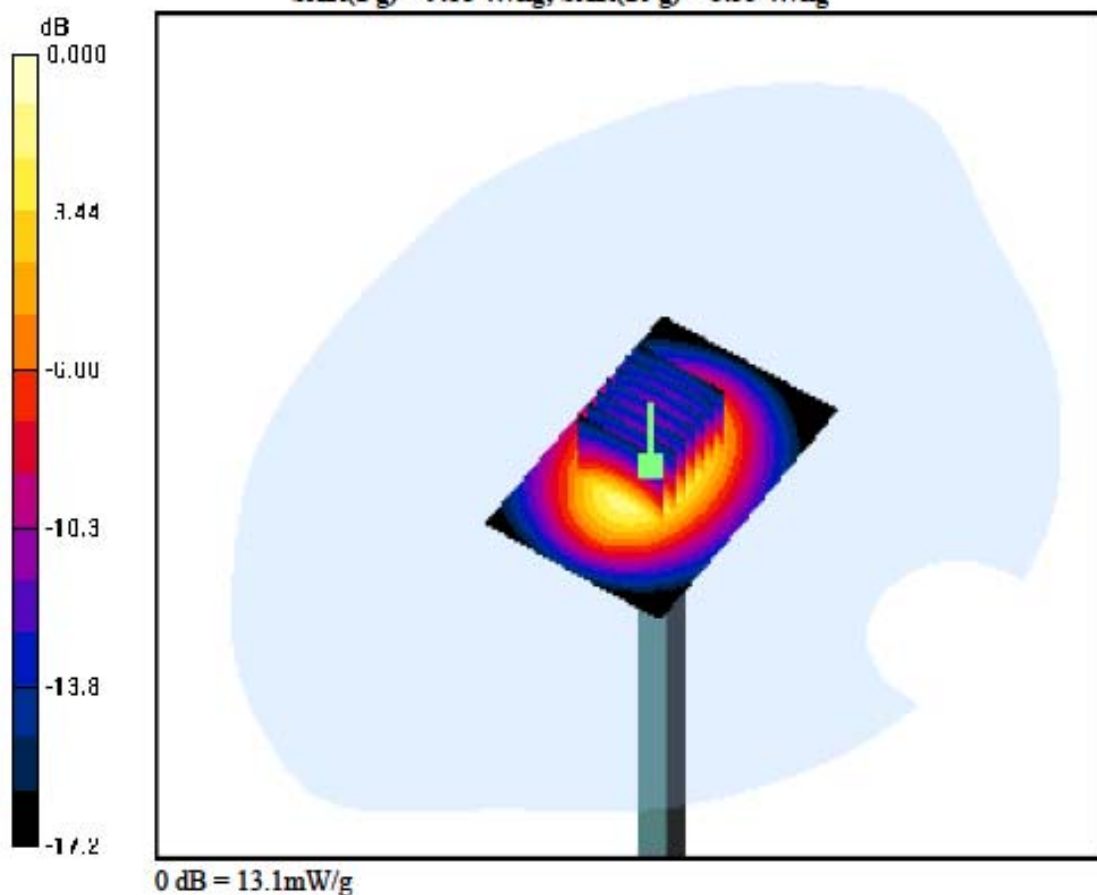
**Area Scan (61x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.029 dB

Peak SAR (extrapolated) = 17.7 W/kg

SAR(1 g) = 9.88 W/kg; SAR(10 g) = 5.35 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.85 \text{ mho/m}$ ;  $\epsilon_r = 38.6$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY4 Configuration:**

Probe: EX3DV4 - SN3643; ConvF(7.4, 7.4, 7.4); Calibrated: 2011-01-24; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2011-07-08; Ambient Temp: 22.1; Tissue Temp: 22.3

### **Dipole Validation**

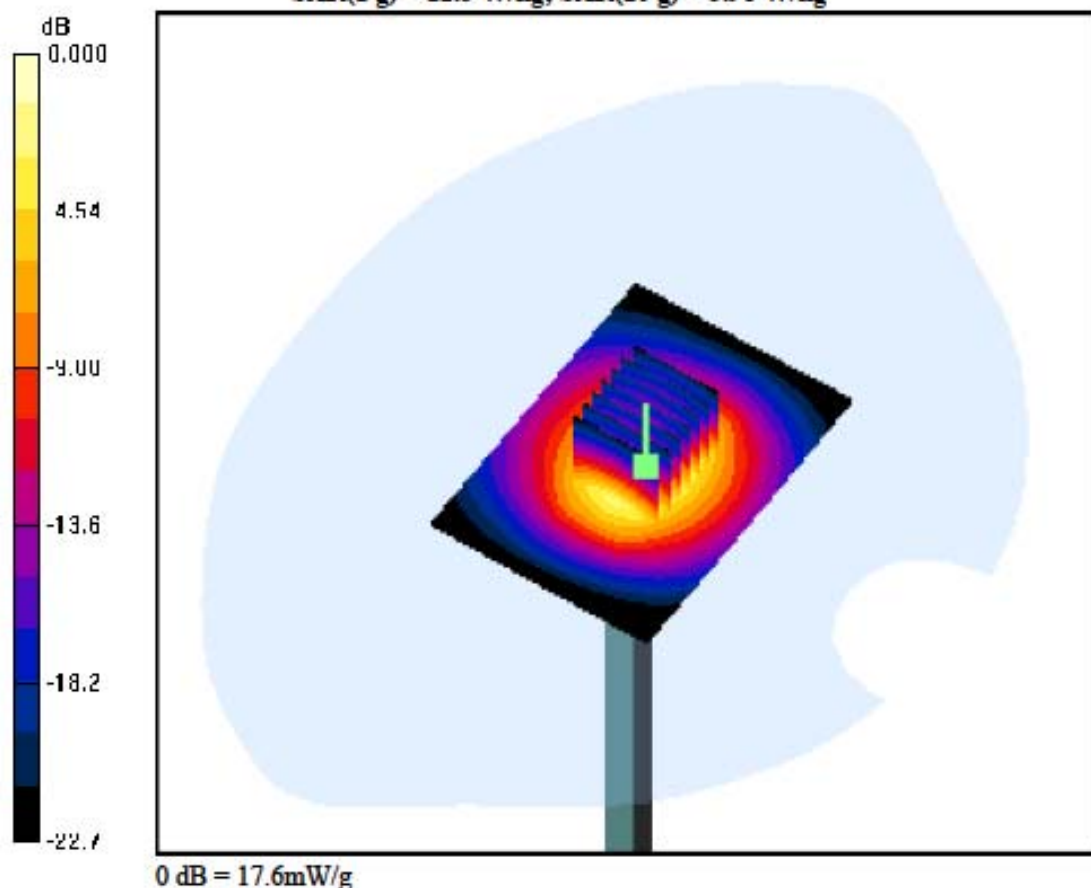
**Area Scan (51x71x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = -0.018 dB

Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 12.5 W/kg; SAR(10 g) = 5.98 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 2 \text{ mho/m}$ ;  $\epsilon_r = 52.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY4 Configuration:**

Probe: EX3DV4 - SN3643; ConvF(7.03, 7.03, 7.03); Calibrated: 2011-01-24; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2011-07-08; Ambient Temp: 22.1; Tissue Temp: 22.3

### **Dipole Validation**

**Area Scan (51x71x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = -0.028 dB

Peak SAR (extrapolated) = 26.3 W/kg

SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.9 W/kg

